

Infectious Diseases/Waterborne (Great Lakes Initiative)

Assignment Description

The fellow will be assigned to the Communicable Disease Section within the Illinois Department of Public Health (IDPH) Division of Infectious Diseases, and will also work closely with personnel from the Vaccine Preventable Diseases, and Informatic Surveillance, and the Division of Environmental Health. The CD section is responsible for state-wide communicable disease surveillance, prevention, and control programs, which is conducted in collaboration with 96 local health departments (LHDs). The Communicable Disease Section is responsible for monitoring over 60 diseases/conditions within the state of Illinois, teaching and collaborating with health partners and stakeholders.

Day-to-Day Activities

With a population of over 13 million, Illinois has great diversity, from rural to large metropolitan areas. The volume of infectious diseases reported to the Department is significant and staff members are at times required to work on single cases or outbreaks of new and emerging pathogens. The fellow would be involved in infectious disease and waterborne surveillance, outbreak investigations and various projects with local health departments, other state health departments and federal agencies.

Potential Projects

The fellow will be able to choose from numerous potential projects including but not limited to the following:

- 1) Oversight of surveillance data for diseases transmitted via water (e.g. cryptosporidiosis, legionellosis), which would require review of surveillance data for completeness, development and review of reports to identify clusters of cases, and working with LHDs.
- 2) Investigate and analyze rabies data (testing, and treatment) throughout the state and assist the state veterinarian with the development of new protocols and procedures that will enhance the state's ability to acquire and analyze rabies data more efficiently.
- 3) Participation in outbreak investigations, which could include developing questionnaires, databases and memos to the field; analyzing data; drafting final outbreak reports; and entry of reports into the CDC outbreak surveillance system. Outbreaks may be due to more common pathogens (e.g. Tuberculosis, histoplasmosis, cryptosporidiosis, Salmonella, Shiga toxin producing E. coli) or less common causes (i.e. novel influenza viruses, extensively drug resistant organisms, contaminated medications, etc.).
- 4) Coordinate with informatics surveillance experts to establish a regional system for sharing data on reportable infectious diseases with surrounding states.
- 5) Analyze state-wide vector-borne disease data and exposure locations. The data for this project is constantly updated in the Illinois-National Electronic Disease Surveillance System.

6) Assist subject matter experts (state veterinarian, vaccine preventable diseases, etc) with field work and data analysis for outbreaks ongoing in the state

7) Participation in waterborne and other outbreak investigations, which could include developing questionnaires, databases and memos to the field; analyzing data; drafting final outbreak reports; and entry of reports into the CDC outbreak surveillance system. Outbreaks may be due to common pathogens (e.g. cryptosporidiosis, Salmonella, Shiga toxin producing E. coli) or less common causes, such as contaminated medications or animal contact.

8) Work with the Environmental Health Division on projects such as studying the use of total maximum daily load issues related to Great Lakes beaches; evaluation of PCR for E. coli versus culture for lake beaches; participating in Great Lakes sanitary surveys; and collaboration with other Great Lake states over water issues.

9) Work closely with IDPH EH Division and Illinois Environmental Protection Agency (IEPA) on blue-green algae issues (health affects, etc). Testing of bodies of water in Illinois for blue-green algae began in 2011, but a specific Illinois response to increasing levels has not been established. This project will require working with several agencies in the development of a response plan.

Preparedness Role

The fellow will have the opportunity to participate in response planning and training, as well as other exercises or responses to events in Illinois during their time with the Illinois Department of Public Health. The fellow will also have the opportunity to work closely with the IDPH Chief of Communicable Diseases and the Office of Preparedness and Response to establish and implement protocols which will enhance IDPH's emergency readiness and outbreak response systems.

Assignment Location: Illinois Department of Public Health
Springfield, IL

Primary Mentor: Connie Austin, DVM, MPH
State Veterinarian

Secondary Mentor: Fredrick Echols, MD
Chief, Communicable Diseases